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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/772,796

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Brian M. Blount

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EXAMINER

GILBERT, WILLIAM V

ART UNIT

PAPER NUMBER

3635

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/772,796	<b>Applicant(s)</b> BLOUNT, BRIAN M.	
	<b>Examiner</b> William V. Gilbert	<b>Art Unit</b> 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 33-49 and 51-65 is/are pending in the application.
- 4a) Of the above claim(s) 33-37 and 56-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-49, 51-55, 63-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/8/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

This is a Final Office Action. Claims 33-49 and 51-65 are pending. Claim 50 is cancelled. Claims 33-37 and 56-62 are withdrawn from consideration. Claims 38-49, 51-55 and 63-65 are examined.

### ***Information Disclosure Statement***

1. Applicant's IDS, submitted 08 May 2008, contains a reference to a Sitzler patent (U.S. Patent No. 4,454,703). This reference appears to be to a framing member, not a concrete slab, and while considered by the examiner, it appears to have no bearing on the present application. If there is a particular feature to be noted, or this is in error, please clarify.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 64 and 65** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

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out and distinctly claim the subject matter which applicant regards as the invention.

The claims reference designing a panel to reduce "occurrence of weak planes" and "occurrence of fracture planes", yet no structural limitations are provided in the claims so that one of ordinary skill in the art can make or use the invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 38-49, 51-55, and 63-65** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadros (U.S. Patent No. 5,440,845) in view of Lockwood (U.S. Patent No. 5,894,003).

Claim 38: Tadros discloses a thin reinforced concrete panel comprising a rectangular body of concrete (e.g. 20B, 24B) having a set of pretensioned parallel tendons (30B, 32B, see Fig. 12 where the tendons are under a tensile force prior to the casting of the concrete) extending through the body, and the tendons are under a pretensioned force (see e.g. Figs 15 and 16, generally). Tadros does not disclose the location of the tendons as claimed, though it does disclose that the tendons may be placed in varying directions to accommodate load requirements (Col. 6, lines 30-40). Lockwood discloses a rectangular panel with first and second pairs of reinforcement (17, 16: see "A" from attached Fig. 2 from Lockwood below for an example of a pair of tendons) with the first set of tendons are spaced a first predetermined distance of the first and second faces of the body, which is less than half the distance between the faces (as shown in the drawings, the tendons are offset laterally from each other (see "A" below), and the same limitations apply to the third and

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fourth tendons (16), the tendons are spaced substantially equidistantly from each adjacent pair (as shown in the drawings.) It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the tendons oriented as in Lockwood because Tadros notes that the tendons can be located as necessary, so to orient the tendons as in Lockwood would be within the level of skill in the art. Further, the prior art of record does not disclose that the tendons are pretensioned to substantially the same tension. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the members at the same tension to exert even forces on the panel when the panel is in a stressed state. Last, the prior art of record does not disclose that the diameter of the tendons is the same. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the tendons the same diameter in order for the force distribution to be proper.

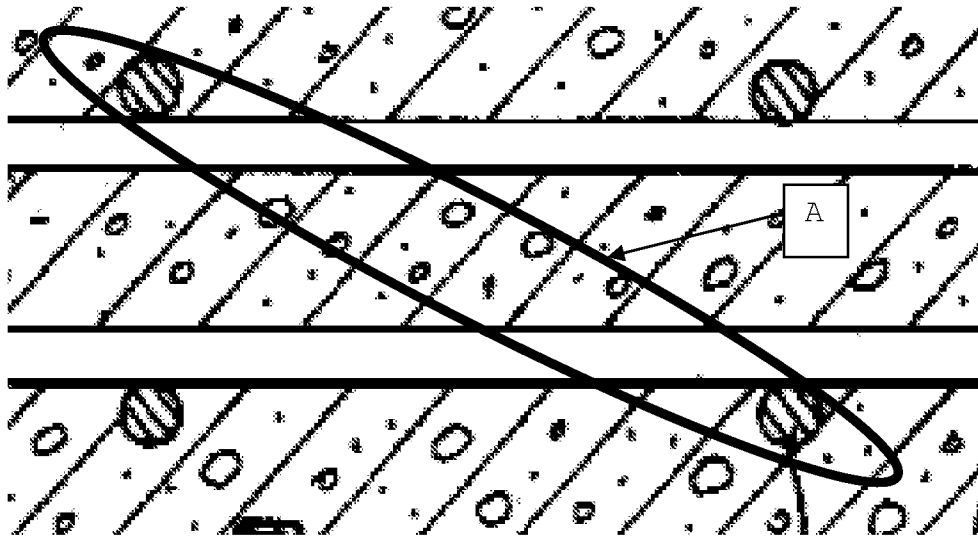


Figure 2 from Lockwood

Claim 39-43: Tadros in view of Lockwood discloses the claimed invention except for the spacing of the faces (Claims 39 and 41), the diameter of the tendons (Claims 40 and 42), and the sufficiency of the prestress (Claim 43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have these limitations because while Tadros discloses the desired thickness of the inner portion of the panel, this thickness is only a suggestive value (Col. 3, lines 25-30 "**should** generally be at least one inch in thickness" emphasis added) so one of ordinary skill in the art could design the slab to meet the desired limitations, including thickness and tendon size, and

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one would design the slab to that the tendons would not fail when the tension is applied.

Claims 44-46: the prior art of record discloses the claimed invention including that the stressing rods are wire rope (Tadros, as shown in the drawings) but not the diameter of the tendon, nor the spacing of the tendon. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have these limitations because one of ordinary skill in the art would design a prestressed panel to function properly without failure.

Claim 47: it is an inherent feature that the face of the slab is textured (e.g. a smooth, brushed, or natural textured finish) using the broadest reasonable interpretation.

Claim 48: Tadros discloses a thin, reinforcing concrete panel (Fig. 2, generally) comprising a concrete body with first and second faces, a pair of opposite side edges and a pair of opposite end edges, a first plurality of pairs of tensioned tendons (30A, 32A) extending through the body between the opposite side edges and positioned so that one of the tendons is spaced a first predetermined distance from a first centroidal plane proximate the first face. Tadros does not disclose a second plurality of pairs of tendons under tension as claimed and spaced a second predetermined distance. Lockwood discloses



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a concrete panel with reinforcement (16 and 17) that is spaced first and second distances from a first and second centroidal axis as claimed (see Fig. 2, generally; see also "A" above for how a pair of tendons are defined.) Note that the predetermined distances as claimed can be the same or different. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the tendons oriented as in Lockwood because Tadros notes that the tendons can be located as necessary, so to orient the tendons as in Lockwood would be within the level of skill in the art. Further Tadros discloses that the tendons may be placed as necessary to accommodate varying loads (Co. 6, lines 30-40.)

Claim 49: the prior art of record discloses the claimed invention except that the tendons have the same diameter, or that the second predetermined distance is greater than the first predetermined distance with the limitations as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because it is well known in the art to have the tendons in a slab be the same size in order to evenly distribute the tensioning load and one of ordinary skill in the art would have the predetermined distances be different

so that the tendons would not come in contact as they cross each other.

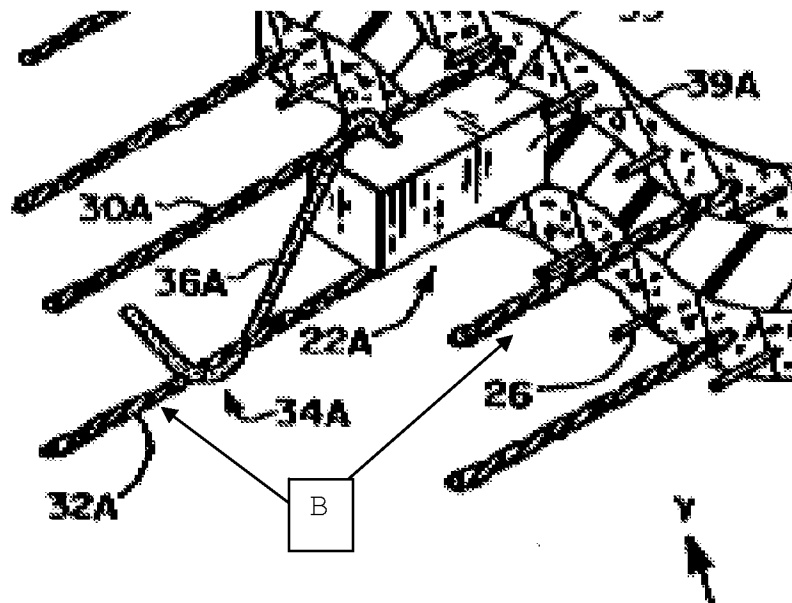
Claim 51: the phrases "formed by positioning..." and "cutting the material..." are method steps and only the apparatus is provided consideration. The tendon (e.g. Fig. 2: 32A) has a loop (36A) and material (35) that overlap.

Claim 52: Tadros discloses a thin reinforced concrete panel (12A) comprising a concrete body with a first and second face, the faces are parallel to each other and a panel (the slab) between the faces, a pair of opposite side edges and a pair of opposite end edges, a first set of pretensioned parallel tendons (30A, 32A) extending through the body between the opposite end edges, the first set of tendons comprise a plurality of pairs of tendons, comprising a first and second tendon, the first tendons being at a first distance from the mid-plane, between the mid-plane and first face of the body (see Fig. 2) the first and second tendons being offset laterally from one another (see "B" from attached Fig. 2 from Tadros, below.) Tadros does not disclose a second set of tendons as claimed, though it does note that the tendons can be configured as needed (Col. 6, lines 30-40). Note that according to Figure 2, all four tendons are spaced from a mid-plane and that under the broadest reasonable interpretation, all four distances can either be the same or

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different. Lockwood discloses a concrete panel with first and second sets of reinforcement (16, 17) that are laterally offset ("A" above) and spaced as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the spacing as claimed with the apparatus in Tadros because Tadros notes that the tendons can be arranged as needed, so the arrangement as claimed is within the level of skill in the art at the time the invention was made. Tadros further does not disclose that each of the tendons is prestressed to substantially the same tension. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the same tension on the tendons in order to properly distribute the loadings of the panel, and uneven tensions could result in failure of the panel.

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**Figure 2 from Tadros**

Claims 53 and 54: though the prior art of record does not specifically disclose the distances, it would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because one of ordinary skill in the art would design a panel so that it would not fail, and if the desired feature required that the distances be different, than one of ordinary skill in the art would have the distances as different.

Claim 55: the first and second tendons are in a pair of tendons and have a centerline therebetween (an inherent feature); however, it does not disclose the limitation as

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claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because one of ordinary skill in the art would design a prestressed panel to not fail and the prior art of record is capable of meeting the limitation as needed (see Col. 6, lines 20-31).

Claim 63: while the prior art of record does not particularly disclose the tendons are bonded with the concrete, the disclosure is silent as to the presence of sheaths with the tendons, and the figures do denote the tendons are in direct contact with the concrete, so to have the tendons bonded with the concrete would be well within the level of skill in the art at the time the invention was made so that the tendons will function properly with the panel.

Claims 64 and 65: the prior art of record discloses the claimed invention except for the design of the location of the tendons to reduce the occurrence of weak planes in the panel and reduce occurrence of fracture planes intersecting the mid plane between the faces of the panel. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because it is well within the level of skill in the art to design structural members to avoid failure of the system.

***Response to Arguments***

4. The following addresses applicant's remarks/arguments dated 19 February 2008:

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection as the applicant amended the claims.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated

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from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Gilbert whose telephone number is 571.272.9055. The examiner can normally be reached on Monday - Friday, 08:00 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571.272.6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard E. Chilcot/  
Supervisory Patent  
Examiner, Art Unit 3635

/W. V. G./  
Examiner, Art Unit 3635